



NUCLEAR REGULATORY COMMISSION

10 CFR Parts 50 and 52

[NRC-2008-0122]

Criteria for Development of Evacuation Time Estimate Studies

(NUREG/CR-7002, Revision 1)

AGENCY: Nuclear Regulatory Commission.

ACTION: NUREG; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing Revision 1 to NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies."

This revised NUREG provides guidance to meet NRC requirements for development of evacuation time estimates (ETEs) to support emergency planning. This revision reflects the importance of various ETE model parameters based on the results of an applied research study on ETEs. The format and criteria provided in this document will support consistent application of the ETE methodology and will facilitate consistent NRC review of ETE studies.

DATES: NUREG/CR-7002, Revision 1 is available on **[INSERT DATE OF PUBLICATION IN THE *FEDERAL REGISTER*]**.

ADDRESSES: Please refer to Docket ID **NRC-2008-0122** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Web Site:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2008-0122**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; e-mail:

Stacy.Schumann@nrc.gov. For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- **NRC's Agencywide Documents Access and Management System**

(ADAMS): You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to pdr.resource@nrc.gov. NUREG/CR-7002, Rev. 1, "Criteria for Development of Evacuation Time Estimate Studies" is available in ADAMS under Accession No. ML21013A504.

- **Attention:** The PDR, where you may examine and order copies of public documents, is currently closed. You may submit your request to the PDR via e-mail at pdr.resource@nrc.gov or call 1-800-397-4209 or 301-415-4737, between 8:00 a.m. and 4:00 p.m. (EST), Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Todd Smith, Office of Nuclear Security and Incident Response, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301-287-3744, e-mail: Todd.Smith@nrc.gov.

SUPPLEMENTARY INFORMATION:

I. Discussion

The ETE is a calculation of the time to evacuate the plume exposure pathway emergency planning zone (EPZ), an area around a nuclear power plant for which planning is needed to ensure that prompt and effective actions can be taken in the event of a radiological emergency. The ETE is primarily used to inform protective action strategies within the EPZ and may be used to assist in the development of traffic management plans to support an evacuation. In November 2011, the NRC issued NUREG/CR-7002, "Criteria for Development of Evacuation Time Estimate Studies" (ADAMS Accession No. ML113010515), as guidance to support compliance with ETE provisions added to the NRC's regulations in title 10 of the *Code of Federal Regulations*,

part 50, appendix E, section IV, in a final rule issued on November 23, 2011 (76 FR 72560). The initial release of this guidance was based on previous advancements in the development of ETE modeling and knowledge gained through research of large scale evacuations and staged evacuations.

The revised NUREG/CR-7002 is based on an applied research study to examine, through modeling and simulation, technical subjects associated with the use of traffic simulation models for ETE studies, documented in NUREG/CR-7269, "Enhancing Guidance for Evacuation Time Estimate Studies" (ADAMS Accession No. ML20070M158). Specific areas of research included the impact of shadow evacuations, evacuation model boundary conditions, the use of manual traffic control, and the sensitivity of various model parameters important to ETE studies. The study provided a technical basis for revisions to NUREG/CR-7002 to reflect current practices in transportation modeling and an enhanced understanding of evacuation dynamics. The NRC's intent in revising NUREG/CR-7002 is to ensure consistency in the development and review of ETE studies.

II. Additional Information

Following development of the revised guidance, the NRC posted the draft NUREG/CR-7002, Rev. 1 to the Federal Rulemaking website at <https://www.regulations.gov> for a 45-day public comment period (85 FR 52930; August 27, 2020). The NRC held a public meeting on September 16, 2020, to discuss the scope of the proposed revisions. The comment period closed on October 13, 2020. In total, the NRC received, reviewed, and considered 10 comments during the development of this revision. Of the 10 comments, 7 were accepted (i.e., the NRC revised the draft guidance exactly as recommended), 2 were agreed to in part, and 1 comment was rejected. In all, nine comments resulted in revisions to the draft guidance. A detailed report on the comment resolutions, including the agency's rationales for each comment's disposition, will be available for review in ADAMS under Accession No. ML21007A043 and at <https://www.regulations.gov/>, under Docket ID **NRC-2008-0122**,

within 30 days after issuance of the final NUREG/CR-7002, Rev. 1. Additionally, in response to EPFAQ 2020-01 (ADAMS Accession No. ML20206L127), the NRC revised the draft guidance to clearly define the decennial period as it applies to the ETE updates required by 10 CFR part 50, appendix E, sections IV.5 and IV.6.

III. Backfitting, Forward Fitting, and Issue Finality

Issuance of NUREG/CR-7002, Rev. 1 does not constitute backfitting as defined in 10 CFR 50.109, "Backfitting," and as described in NRC Management Directive (MD) 8.4, "Management of Backfitting, Forward Fitting, Issue Finality, and Information Requests"; affect issue finality of any approval issued under 10 CFR part 52, "Licenses, Certificates, and Approvals for Nuclear Power Plants"; or constitute forward fitting as defined in MD 8.4, because, as explained in NUREG/CR-7002, Rev. 1, licensees are not required to comply with the positions set forth in that document.

IV. Paperwork Reduction Act

NUREG/CR-7002, Rev. 1, does not contain any new or amended collections of information subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing collections of information were approved by the Office of Management and Budget, approval numbers 3150-0011 and 3150-0151.

V. Congressional Review Act

The NUREG/CR-7002, Rev. 1, is a rule as defined in the Congressional Review Act (5 U.S.C. 801-808). However, the Office of Management and Budget has not found it to be a major rule as defined in the Congressional Review Act.

Dated: February 3, 2021.

For the Nuclear Regulatory Commission.

Mark D. Lombard, Deputy Director,
Office of Nuclear Security and Incident
Response.